

REMARKS

Claims 1, 28, 33, 34 and 38-42, as amended, remain herein. Claim 1 has been amended. New claims 41 and 42 have been added. Support for the amendment and the new claims may be found throughout the specification (see, e.g., original claims; Examples 1 and 4; Table 1 at page 66; page 11, lines 23-28; and page 35, lines 9-20 and lines 26-29 of the specification). Support for the claim element that “the ratio of donor to acceptor in the intermediate electrode layer is between 2:98 to 20:80” may be found at page 35, lines 9-20 and lines 26-29 of the specification (a donor content of 2% by weight corresponds to a 2:98 ratio and a donor content of 20% by weight corresponds to a 20:80 ratio).

Applicants thank the Examiners for the telephonic interview conducted on December 14, 2010. During the Interview, applicants’ representatives and the Examiners discussed the patentability of the pending claims, as well as potential amended claims, over the cited prior art. The arguments made during the interview are included in the remarks below herein.

1. Claims 1, 28 and 39 are patentable over Kido et al. U.S. Patent Application Publication 2003/0189401. The USPTO Examiners agreed that the rejection over Kido is overcome by the Amendment filed December 3, 2010.

2. Claims 1, 28, 33, 34 and 38 are patentable over Tanaka et al. U.S. Patent 6,107,734 in view of Mori U.S. Patent 6,215,245 and Tsutsui et al. U.S. Patent Application Publication 2003/0127967.

Applicants' claim 1 recites an organic electroluminescent device comprising: at least two or more emitting layers between an anode and a cathode, and an intermediate electrode layer being interposed between emitting layers, the intermediate electrode layer being a single layer or a multilayer structure, at least one of the layers comprising a semiconductive material and at least one of the layers comprising a donor that is an alkali metal and/or an alkaline earth metal, the semiconductive material comprising an acceptor that is at least one conductive oxide comprising a transition metal selected from the group consisting of NbO_x, LaO_x, NdO_x, SmO_x, EuO_x, MoO_x, WO_x, OsO_x, IrO_x and PtO_x, wherein x is 0.2 to 5; wherein the acceptor is the main constituent of the intermediate electrode layer and the ratio of donor to acceptor in the intermediate electrode layer is between 2:98 to 20:80.

None of Tanaka, Mori, and Tsutsui discloses applicants' claimed intermediate electrode layer comprising a donor that is an alkali metal and/or an alkaline earth metal, and an acceptor that is at least one conductive oxide comprising a transition metal selected from the group consisting of NbO_x, LaO_x, NdO_x, SmO_x, EuO_x, MoO_x, WO_x, OsO_x, IrO_x and PtO_x, wherein the acceptor is the main constituent of the intermediate electrode layer and the ratio of donor to acceptor in the intermediate electrode layer is between 2:98 to 20:80.

Claims 40 and 41 are further patentable because none of Tanaka, Mori and Tsutsui discloses applicants' claimed intermediate electrode layer having a resistivity between 0.001 and 10,000 Ω.cm or between 0.01 and 100 Ω.cm. For instance, in Mori, the resistivity of the cathode materials is very low. See Mori, column 3, lines 49-50 ("Stable compounds [] may be used if their conductivity is equivalent to those of pure metals.").

Claim 42 is further patentable because none of Tanaka, Mori and Tsutsui discloses applicants' claimed intermediate electrode layer comprising MoOx as the semiconductive material and a donor that is an alkali metal and/or an alkaline earth metal.

Thus, none of Tanaka, Mori, and Tsutsui discloses or suggests applicants' claimed invention. In addition, there is no disclosure or suggestion in any of Tanaka, Mori, Tsutsui or anything else in this record that would have suggested the desirability of modifying or combining any portions thereof effectively to anticipate or render obvious applicants' claimed invention.

3. Claim 39 is patentable over Tanaka in view of Mori and Tsutsui further in view of Liao et al. U.S. Patent Application Publication 2004/0227460. Claim 39 depends from claim 1.

As discussed above, Tanaka, Mori, and Tsutsui do not disclose all elements of applicants' claim 1. Liao does not teach or suggest what is missing from Tanaka, Mori, and Tsutsui.

Thus, none of Tanaka, Mori, Tsutsui, and Liao discloses or suggests applicants' claimed invention. In addition, there is no disclosure or suggestion in any of Tanaka, Mori, Tsutsui, Liao, or anything else in this record that would have suggested the desirability of modifying or combining any portions thereof effectively to anticipate or render obvious applicants' claimed invention.

Accordingly, all claims are now fully in condition for allowance and a notice to that effect is respectfully requested. The PTO is hereby authorized to charge/credit any fee deficiencies or overpayments to Deposit Account No. 19-4293. If further amendments would place this application in even better condition for issue, the Examiner is invited to call applicants' undersigned attorney at the number listed below.

Respectfully submitted,

STEPTOE & JOHNSON LLP

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Roger W. Parkhurst
Reg. No. 25,177
Houda Morad
Registration No. 56,742

STEPTOE & JOHNSON LLP
1330 Connecticut Ave., N.W.
Washington, D.C. 20036
Tel: (202) 429-3000
Fax: (202) 429-3902